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PATENTED DEC. 4, 1906.

J. T. CAMPBELL.

BRIDGE FLOOR FASTENER.

APPLICATION FILED JAN. 19, 1906.

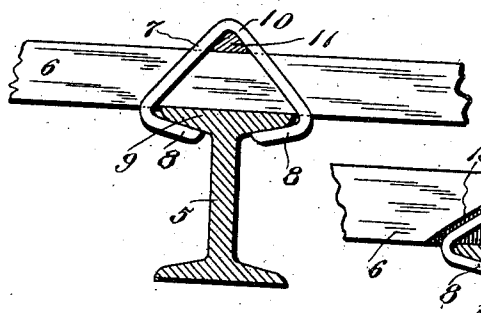


Fig. 2.

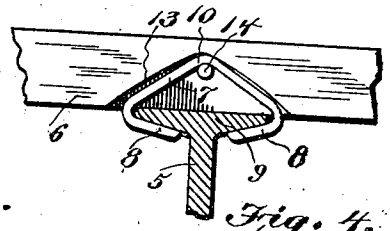


Fig. 4.

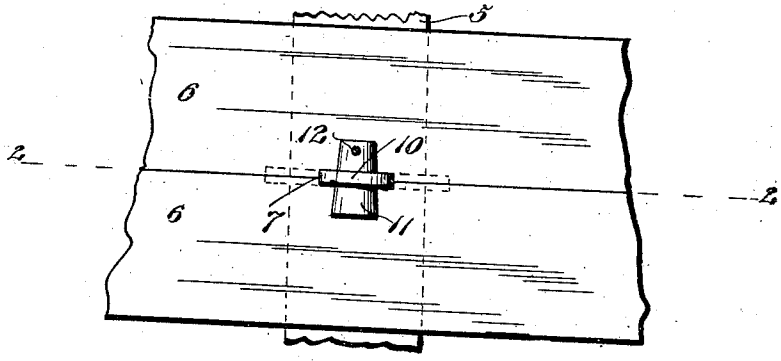


Fig. 1.

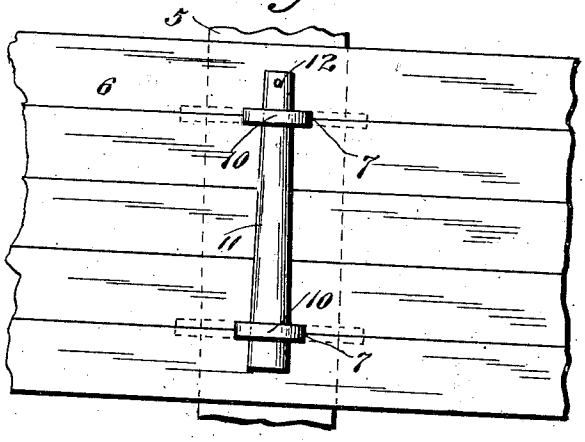


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

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BRIDGE-FLOOR FASTENER.

No. 837,793. Specification of Letters Patent. Patented Dec. 4, 1906.

Application filed January 19, 1906. Serial No. 296,813.

To all whom it may concern:

Be it known that I, JOHN T. CAMPBELL, a citizen of the United States, residing at La Fayette, in the county of Tippecanoe and State of Indiana, have invented new and useful Improvements in Bridge-Floor Fasteners, of which the following is a specification.

This invention is a clip for securing floor-planks to metal beams, and is intended particularly for fastening bridge-floors in place.

The invention has for its object to provide a clip by which the planks can be fastened to the beams or stringers without the use of nails and which will securely hold the planks and also allow them to be quickly taken up when desired for the purposes of repair or otherwise.

In the accompanying drawings, Figure 1 is a plan view of a section of a bridge-floor, showing the application of the invention. Fig. 2 is a transverse sectional view on the line 2 2 of Fig. 1. Fig. 3 is a plan view of a modification. Fig. 4 is an elevation of another modification.

Referring specifically to the drawings, 5 denotes one of the **I**-beams on top of which the floor-planks 6 are supported.

The fastener comprises a substantially triangular metal strap 7, having inturned ends or hooks 8 at the two lower corners extending under the head or upper flanges 9 of the beam 5. At the top or upper corner the bend in the strap forms a loop, as at 10. It is not essential that the strap be triangular, as shown. It may be made semicircular or otherwise curved, the essential features being the loop at the top and the hooks at the lower ends.

In use the strap is placed between the abutting edges of the floor-planks 6, with the hooks 8 extending under the head 9 of the beam 5 and the loop 10 extending above the top of the planks. A wedge or key 11 is then placed on top of the floor-planks and driven through the loop 10 across the joint between said planks, whereby they are securely clamped to the beam 5. After the wedge is driven home it is nailed or spiked to one of the planks, as at 12.

When the planks are narrow, as shown in Fig. 3, the wedge can be made long enough to reach across two or more of said planks and to engage two or more of the straps.

Upon placing the strap between the planks the latter are pressed together, so that said strap is forced into the edges of the planks, or the latter can be recessed to receive the straps.

By the use of a fastener constructed as herein described no nails or spikes are needed for securing the flooring, and a broken or worn plank can be easily replaced. This is done by knocking out the wedges, allowing the old planks to be lifted out, and new ones can then be put down and fastened, as herein described. The fastener is not restricted to bridge-flooring, but can be used wherever wooden planks or boards are to be fastened to metal beams.

In the modified form shown in Fig. 4 the strap is placed in a recess 13 in the edge of the plank, being fastened by a pin 14, which is driven into the edge of the plank and extends through the loop 10. This form of fastener is advantageous, as it is not visible from the floor, and it can be used in connection with various structures requiring fastening means between wood and metal parts.

I claim—

1. A fastener for flooring, comprising a strap having inturned ends adapted to engage under the head of a beam, and bent therebetween to form a loop adapted to extend above the floor, and a key driven through the loop.

2. A fastener for flooring, comprising a strap having hooks at the ends to engage a beam under the floor, and bent to form a loop projecting through the floor, and a key driven through the loop above the floor.

3. A fastener for securing flooring to beams, comprising a strap having hooks at the ends engaging the beam, and a pin extending across under the strap and engaging the flooring.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN T. CAMPBELL.

Witnesses:

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